

(19) 世界知的所有権機関
国際事務局



(43) 国際公開日
2004 年 10 月 7 日 (07.10.2004)

PCT

(10) 国際公開番号
WO 2004/084974 A1

(51) 国際特許分類⁷: A61M 1/36
(21) 国際出願番号: PCT/JP2004/003835
(22) 国際出願日: 2004 年 3 月 22 日 (22.03.2004)
(25) 国際出願の言語: 日本語
(26) 国際公開の言語: 日本語
(30) 優先権データ:
特願2003-081092 2003 年 3 月 24 日 (24.03.2003) JP
(71) 出願人 (米国を除く全ての指定国について): 株式会社ジェイ・エム・エス (JMS CO., LTD.) [JP/JP]; 〒7308652 広島県広島市中区加古町12番17号 Hiroshima (JP).
(72) 発明者; および
(75) 発明者/出願人 (米国についてのみ): 河原畑 茂樹

(KAWARABATA, Shigeki). 勝笹 豊 (KATSUNO, Yutaka). 中尾 彰多 (NAKAO, Shota).

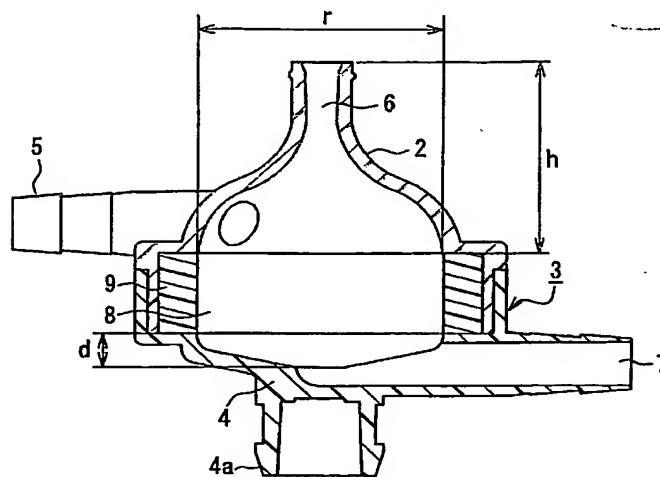
(74) 代理人: 特許業務法人池内・佐藤アンドパートナーズ (IKEUCHI SATO & PARTNER PATENT ATTORNEYS); 〒5306026 大阪府大阪市北区天満橋1丁目8番30号OAPタワー26階 Osaka (JP).

(81) 指定国 (表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[続葉有]

(54) Title: BLOOD FILTER DEVICE AND METHOD OF PRODUCING THE SAME

(54) 発明の名称: 血液フィルタ装置およびその製造方法



(57) Abstract: A blood filter device has a dome portion (2), a housing (1) with a filter-retaining portion (3) and a bottom portion (4), a flow inlet (5) into which blood is caused to flow horizontally in the direction along the inner wall of the dome portion, an air outlet (6) provided in the top of the dome portion, a filter (8) provided in the filter-retaining portion and filtering foreign objects in the blood, and a flow outlet (7) provided in the bottom portion and from which the blood flows out. The blood flowed from the flow inlet into the dome portion passes the filter-retaining portion and flows out from the flow outlet. The filter is a sheet-like filter material folded to form pleats (8a), has, as a whole, a planar plate-like outer shape with the envelope connecting the vertexes of each pleat being flat, and is installed so as to partition the cavity of the housing into the dome portion side and the bottom portion side. The filter effectively removes impurities, thrombi, etc. in blood. Air bubbles remaining in the filter are removed easily.

(57) 要約: ドーム部(2)、フィルタ保持部(3)および底部(4)を有するハウジング(1)と、ドーム部の側面部に、水平方向かつドーム部内壁に沿う方向に血液を流入させる流入口(5)と、ドーム部の頂部に設けられた空気排出口(6)

[続葉有]



(84) 指定国 (表示のない限り、全ての種類の広域保護が可能): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), ユーラシア (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

添付公開書類:

— 国際調査報告書

2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

と、フィルタ保持部に配置され血液中の異物を濾過するフィルタ(8)と、底部に設けられた血液の流出口(7)とを備え、流入口からドーム部に流入した血液がフィルタ保持部を通過して流出口から流出する。フィルタは、シート状濾材が複数のプリーツ(8a)を形成して折り畳まれて、各プリーツの頂部の包絡面が平坦である全体として平板状の外形を有し、ハウジング内腔をドーム部側と底部側とに仕切って配置されている。血液中の不純物や血栓等を効果的に除去しつつ、フィルタ中に残留している気泡の排除も容易である。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/003835

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ A61M1/36

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ A61M1/36, B01D29/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2004
Kokai Jitsuyo Shinan Koho	1971-2004	Toroku Jitsuyo Shinan Koho	1994-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	JP 09-508564 A (Avecor Cardiovascular, Inc.), 02 September, 1997 (02.09.97), Full text; all drawings & WO 96/33770 A1 & EP 767690 A1 & US 5782791 A	1, 10-13 2-9, 14, 16 15
Y A	JP 2000-517240 A (Sartorius AG.), 26 December, 2000 (26.12.00), Page 7, line 21 to page 8, line 22; Fig. 1 & WO 98/9710 A1 & EP 925104 A1 & US 6143174 A	2-9, 14, 16 15
A	JP 04-106605 U (Toyo Roki Mfg. Co., Ltd.), 14 September, 1992 (14.09.92), Full text; all drawings (Family: none)	1-16

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
23 June, 2004 (23.06.04)

Date of mailing of the international search report
13 July, 2004 (13.07.04)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.